

State of California  
The Resources Agency  
DEPARTMENT OF FISH AND GAME  
Biogeographic Data Branch  
California Natural Diversity Database

How to read *RareFind 3* Reports

The California Natural Diversity Database (CNDDDB) is a program within the Department of Fish and Game that maintains a computerized inventory of information on the location and condition of California's rare, threatened, endangered, and sensitive plants, animals, and natural communities. This information is made available, at below cost, in several formats, including as a PC-based application known as RareFind 3. This document explains how to read RareFind 3 reports generated from the RareFind 3 Reports tab in the application.

DEFINITIONS

The individual species and communities inventoried in the CNDDDB are referred to as "elements." There are four categories of elements: Special Plants, Special Animals, Natural Communities, and Aquatic Communities. An "element occurrence" is a site which contains a population or stand of a sensitive element. Although the specific definition of an element occurrence differs among the various elements, with few exceptions, most occurrences can be identified by one of the following general definitions.

1. *Plants* - A population or group of populations found within 0.25 miles and not separated by significant habitat discontinuities.
2. *Animals With Limited Mobility* (most invertebrates, amphibians, reptiles, small mammals, and resident birds) - The location where a specimen was collected, or observed. This is assumed to represent a sample of a breeding population.
3. *Mobile Animals* - (migratory birds and larger mammals) - The location of breeding areas (including nesting territories, dens, and leks) or parts of the range of a mobile population. This may include roosts, overwintering areas, staging areas, etc.
4. *Mobile Aquatic Animals* - The location where a specimen was collected (taken to represent a sample of a population). It may include other sites upstream and downstream which are not separated by a major habitat discontinuity or a physical barrier.
5. *Terrestrial Natural Communities* - A documented location of a stand of vegetation or non-plant-dominated community element (e.g., alkali playa or desert dune). As with plants, nearby sites are included if they fall within 0.25 miles.
6. *Aquatic Natural Communities* - A documented location of contiguous habitat as defined by physical and biotic features.

Our computer reports consist of two parts. The **header** contains general information for each taxon, such as the common and scientific names, federal and state listing status, habitat associations, etc. The **body** contains the particular information for each occurrence.

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**When citing the CNDDDB as an information source, use the following:**

California Natural Diversity Database  
Biogeographic Data Branch  
Department of Fish and Game  
Date (insert date information purchased (Version Date), see lower left corner  
of printout)

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Our computer reports present data as narratives, condensed phrases, abbreviations, and a variety of codes. This enables us to maximize the amount of information given for each record. Most of the codes and abbreviations are straightforward. This handout will explain our report format, field by field. The information is the same for all RareFind reports, with the exception of that for **source codes**; their information is only given in the “Full Report with Sources” report.

- **SCIENTIFIC NAME** - The scientific (Latin) name of a plant or animal or the name of a natural community.
- **COMMON NAME** - The common name of a plant or animal. The field is blank for natural communities since it is the same as the scientific name.
- **ELEMENT CODE** - A ten-character code assigned to each element. It is used for data management purposes.
- **FEDERAL LEGAL STATUS:**

Endangered	Federally Listed Endangered
Threatened	Federally Listed Threatened
Proposed Endangered	Proposed for federal listing as Endangered
Proposed Threatened	Proposed for federal listing as Threatened
Candidate	Candidate for federal listing
None	No official federal listing status
Delisted	Delisted by the federal government
See <i>Federal Register</i> for legal definitions of federal status	
- **CALIFORNIA LEGAL STATUS:**

Endangered	California Listed Endangered
Threatened	California Listed Threatened
Rare	California Listed Rare
Candidate	Candidate for state listing; these are protected from take, just like state-listed taxa
None	No official state listing status
Delisted	Delisted by the state
- **GLOBAL RANK** - The global rank is a reflection of the overall condition (rarity and endangerment) of an element throughout its range. Some global ranks for endemic species are assigned by the CNDDDB biological staff following review of all available information; other global ranks are assigned by other states, other heritage programs or by NatureServe. For a complete explanation of this ranking, please refer to Appendix A.
- **STATE RANK** - The state rank is a reflection of the condition (rarity and endangerment) of an element within the state. The state rank is assigned by the CNDDDB staff. See Appendix A.

- **OTHER LISTS:**

**CDFG** - Indicates whether the species is a Department of Fish and Game Species of Special Concern (**terrestrial vertebrate animals only**).

**CNPS LIST** - Indicates the California Native Plant Society (CNPS) list to which the taxon is assigned (**plants only**).

List 1A: Plants presumed extinct in California

List 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California

List 1B.2: Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California

List 1B.3: Plants rare, threatened, or endangered in California and elsewhere, not very threatened in California

List 2.1: Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California

List 2.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

List 2.3: Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California

List 3.1: Plants about which we need more information; seriously threatened in California

List 3.2: Plants about which we need more information; fairly threatened in California

List 3.3: Plants about which we need more information; not very threatened in California

List 4.1: Plants of limited distribution; seriously threatened in California

List 4.2: Plants of limited distribution; fairly threatened in California

List 4.3: Plants of limited distribution; not very threatened in California

- **HABITAT ASSOCIATIONS** - Information on the general habitat with which the element is associated, and where known, a description of the microhabitat.
- **OCCURRENCE NUMBER** – This number, together with the element code, uniquely identifies a particular location of a species or community. Occurrence numbers are assigned sequentially as the occurrence is mapped. The first location mapped for an element is OCC #1, the eighteenth location is OCC #18, etc. There may be gaps in the number sequence as occurrences are combined.
- **OCC RANK** – Occurrence rank, reflecting the condition and viability of a particular occurrence. Occurrence rank takes into account the population size, viability, habitat quality, disturbance, etc.
  - Excellent
  - Good
  - Fair
  - Poor
  - None (extirpated or possibly extirpated)
  - Unknown
- **ORIGIN** - Indicates whether this occurrence is a natural population, a transplant, a reintroduction, or a refugium.
- **PRESENCE** - Refers to the status of the taxon/stand at this site when it was last observed.

- a. Presumed Extant - The most common entry. An occurrence is presumed to be still in existence until evidence to the contrary is received by the CNDDDB.
- b. Possibly Extirpated - Some evidence of habitat destruction or population extirpation has been received by the CNDDDB for this site, but questions remain as to whether the element still exists here.
- c. Extirpated - Only used when the element has been searched for but not seen for many years or when the habitat at this site is destroyed and CNDDDB is notified.
- **TREND** - Indicates population trend at this site.
  - a. Increasing
  - b. Stable
  - c. Decreasing
  - d. Fluctuating
  - e. Unknown
- **MAP INDEX NUMBER** - The key number linking each feature on the map overlays with its specific text report.
- **DATE ELEMENT LAST OBSERVED** - The most recent date that an observer actually saw the element at this site according to information available to the CNDDDB.
- **DATE SITE LAST VISITED** - The most recent date that an observer visited the site according to information available to the CNDDDB.
- **DATE RECORD LAST UPDATED:** Last date CNDDDB staff updated this record.
- **QUAD SUMMARY** - The name(s) of the United States Geological Survey (USGS) 7.5 minute quadrangle(s) where the occurrence is mapped. The quad code is the 7-digit code which identifies the 7.5 minute USGS quadrangle on which the element occurrence is mapped. This code also appears on corresponding plot reports and map overlays. It is based on a 64-map grid in each 1° of latitude and longitude. The first two numbers indicate latitude; the 3rd-5th numbers indicate longitude and the final two numbers are a row-column designation, starting from the lower right hand corner of the grid.
- **COUNTIES** - The county (or counties) where the occurrence is mapped.
- **LATITUDE, LONGITUDE** - The latitude and longitude of the center point of the element occurrence location (determined by the computer).
- **UTM** - Universal Transverse Mercator coordinates. The zone and northing and easting coordinates of the center point of the element occurrence location (determined by the computer).
- **MAPPING PRECISION:**
  - Specific: A circular feature with a radius of 80 meters or a specific polygon.
  - Non-specific: A circular feature with a radius of 1/10, 1/5, 2/5, 3/5, 4/5, 1 mile, or 5 miles or a non-specific polygon. The sizes of the circles may indicate different confidence levels in the source data or different levels of precision describing the location in the source data.
- **SYMBOL TYPE**

Polygon - Delineates an area where the element is known to occur or, in some cases, includes habitat where the element is known to occur. Polygons can be "specific" or "non-specific," indicating our level of confidence in the source data.

Point - Indicates a circular feature with a radius of 80 meters, 1/10, 1/5, 2/5, 3/5, 4/5, 1 mile or 5 miles.

- **RADIUS** - For circular features only. See above description for **point** symbol type.
- **ELEVATION** - The elevation in feet of the element occurrence.
- **T-R-S** - The Township, Range, and Section of the element occurrence location.
- **QTR** - The half section or quarter section if known.
- **MERIDIAN** - This field contains either "M," "H," or "S." These letters refer to Mt. Diablo, Humboldt, or San Bernardino baseline and meridians, respectively. These are necessary to indicate a unique township, range, and section coordinate.
- **LOCATION** - The specific location of the element occurrence.
- **LOCATION DETAIL, ECOLOGICAL, THREAT, GENERAL, AND OWNERSHIP COMMENTS** - Site specific notes about an element's distribution, habitat, associated species, threats, population size, general comments, and ownership information.
- **SOURCE CODES** - A 10-character code assigned to any information which is used to map an occurrence. Includes: the first three letters of the contributor's last name, year of the document (or year of field visit in the case of field survey forms), one character code for type of document (F = field survey form, R = report, M = map, U = personal communication or other type of correspondence, B = book, D = digital data), and a four-character tie-breaker – assigned and used internally by the CNDDDB.
- **RAREFIND VERSION DATE** - Date data were generated at CNDDDB.
- **REPORT DATE** - Date report was printed.
- **EXPIRATION DATE** – Date subscription and data expire.

# APPENDIX A

## ELEMENT RANKING

### GLOBAL RANKING

The *global rank* (G-rank) is a reflection of the overall condition of an element throughout its global range.

#### SPECIES OR NATURAL COMMUNITY LEVEL

- G1** = Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.  
**G2** = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres.  
**G3** = 21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres.  
**G4** = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.  
**G5** = Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

#### SUBSPECIES LEVEL

Subspecies receive a **T-rank** attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii*. This plant is ranked G2T1. The G-rank refers to the whole species range i.e., *Chorizanthe robusta*. The T-rank refers only to the global condition of var. *hartwegii*.

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### STATE RANKING

The *state rank* is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

- S1** = Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres  
    S1.1 = very threatened  
    S1.2 = threatened  
    S1.3 = no current threats known  
**S2** = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres  
    S2.1 = very threatened  
    S2.2 = threatened  
    S2.3 = no current threats known  
**S3** = 21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres  
    S3.1 = very threatened  
    S3.2 = threatened  
    S3.3 = no current threats known  
**S4** - Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.  
**S5** - Demonstrably secure to ineradicable in California. NO THREAT RANK.

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#### Notes:

- Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take a bird's eye or aerial view when ranking sensitive elements rather than simply counting EOs.
- Uncertainty about the rank of an element is expressed in two major ways:  
  
By expressing the rank as a range of values: e.g., S2S3 means the rank is somewhere between S2 and S3.  
  
By adding a ? to the rank: eg., S2? This represents more certainty than S2S3, but less than S2.
- Other symbols  
  
GH All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists (SH = All California sites are historical).  
GX All sites are **extirpated**; this element is extinct in the wild (SX = All California sites are extirpated).  
GXC Extinct in the wild; exists in cultivation.  
G1Q The element is very rare, but there is a taxonomic question associated with